

Response to Final Office Action
Mailed July 14, 2003
For Serial No. 09/853,276

REMARKS

In the Official Action, the Examiner rejected claims 1-3, 5-7, and 10-15. Claims 4, 8, and 9 were previously withdrawn from consideration. Claims 1-3, 5-7, and 10-15 remain pending in the present patent application. Reconsideration of the application, in view of the remarks set forth below, is respectfully requested.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1, 2, 5, 11, and 15 under 35 U.S.C. § 102(e) as being anticipated by the Hatanaka et al. reference (U.S. Patent No. 6,130,735). Specifically, the Examiner stated:

As to claims 1, 2, 5, 11, and 15, Hatanaka discloses in Embodiment 2 (col. 7, line 35 through col. 8, line 20) and Figures 1-3, a liquid crystal display (LCD) comprising:
a liquid crystal cell display screen, 13;
a polarizer, 11 (Applicant's transparent panel), having a backside and an anti-glare front surface configured to diffuse ambient light comprising an anti-reflective layer disposed on the anti-glare front surface (col. 8, lines 1-6); and
a front scattering film layer, 10a (Applicant's bulk diffuser), wherein the bulk diffuser comprises a diffusive material configured to diffuse light within the diffusive material (col. 7, lines 49-67), disposed between the display screen, 13, and the backside, wherein the bulk diffuser is bonded (col. 7, lines 65-67 and col. 8, lines 3-7) to the display screen and the transparent panel, and
the bulk diffuser is configured to diffuse image light of the display (col. 7, lines 49-67).

Applicant respectfully traverses this rejection. Anticipation under 35 U.S.C. § 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate

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under 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under 35 U.S.C. § 102, a single reference must teach each and every element or step of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). A *prima facie* case of anticipation under 35 U.S.C. § 102 requires a showing that each limitation of a claim is found in a single reference, practice or device. *In re Donohue*, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985). Thus, if the claims recite even one element not found in the cited reference, the reference does not anticipate the claimed invention.

The Hatanaka reference fails to disclose each element of independent claim 1.

Specifically, independent claim 1 recites:

a display screen,
a transparent panel having a backside and an anti-glare front surface *configured to diffuse ambient light*; and
a bulk diffuser disposed between the display screen and the backside, wherein the bulk diffuser is bonded to at least one of the display screen and the transparent panel, and the bulk diffuser is *configured to diffuse image light* of the display.

In contrast, the Hatanaka reference teaches a liquid crystal cell 13, a scattering film layer 10 disposed in front of the liquid crystal cell 13, a retardation film layer 12 disposed in front of the scattering film layer 10, and a polarizer 11 disposed in front of the retardation film layer 12.

Column 7, lines 42-48.

In the Official Action, the Examiner correlated the scattering film layer 10 to the presently claimed bulk diffuser. See Paper No. 9, pages 3-4. However, this film layer 10 is not

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configured to diffuse *image* light. Instead, the front scattering film layer 10 diffuses only *ambient* light entering the display. In explaining the benefits of film layer 10, the Hatanaka reference explicitly states “it was confirmed that blurry image was lessened [sic] because *scattering does not occur when light is emitted from the reflective liquid crystal display device to the direction of the viewer.*” Column 8, lines 57-61. To be clear, the emitted light of the reflective display *is not* scattered. This emitted light allows the viewer to perceive the image of the liquid crystal display. Therefore, because the scattering film 10 does not diffuse emitted light, it cannot be reasonably compared to a bulk diffuser “configured to diffuse image light” as recited by independent claim 1.

Because the Hatanaka reference fails to disclose each recited element, independent claim 1 is not anticipated by the reference and is believed patentable over the references cited by the Examiner. Additionally, claims 2, 5, 11, and 15 depend from allowable independent claim 1. Consequently, these dependent claims are allowable for the same reasons provided above with respect to independent claim 1, as well as for the subject matter recited by each dependent claim. Accordingly, Applicant respectfully requests withdrawal of the Examiner’s rejection and allowance of these claims.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 3, 6, and 10 under 35 U.S.C. § 103(a) as being unpatentable over the Hatanaka reference in view of the Morgan et al. reference (U.S. Patent No. 6,068,227). The Examiner also rejected claim 7 under 35 U.S.C. §103(a) as unpatentable over Hatanaka and Morgan in view of the Varaprasad et al. reference (U.S. Patent No. 6,087,012). Finally, the Examiner rejected claims 12, 13, and 14 under 35 U.S.C. §103(a) as unpatentable over Hatanaka in view of the Sanelle et al. reference (U.S. Patent No. 6,181,394).

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and

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choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Applicant respectfully traverses the foregoing rejections. Dependent claims 3, 6, 7, 10, and 12-14 ultimately depend from independent claim 1, which is believed allowable over the Hatanaka reference for the reasons set forth above. The Morgan, Varaprasad, and Sanelle references cited by the Examiner fail to obviate the deficiencies of the primary reference. Consequently, dependent claims 3, 6, 7, 10, and 12-14 are patentable at least for their dependencies upon allowable independent claim 1, in addition to the subject matter recited by each dependent claim. Accordingly, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance of these claims.

Further, in rejecting claims 6, 7, and 10, the Examiner has ignored the disclosure of Hatanaka, which clearly teaches away from a combination with the Morgan reference. It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983). Dependent claim 6, from which claims 7 and 10 depend, recites that the anti-glare front surface of claim 1 comprises a surface texture. Contrarily, the Hatanaka reference specifically teaches away from *undulated* surfaces, such as those formed in an etched surface as disclosed by Morgan. In the background of the invention section, the Hatanaka et al. reference discloses:

Conventional *reflective* liquid crystal display devices include...one having scattering characteristics by undulations formed on an upper substrate or the like as disclosed in Japanese Laid-open Patent No. 8-338993 (hereinafter called prior art II).

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However, if provided with scattering characteristics by *undulations* as in the prior art II, *back scattering occurs* at the time of incidence of surrounding light into the liquid crystal display device. As a result, the reflectivity in black display is not lowered sufficiently, and high contrast is not obtained.

Hatanaka et al., Col. 1, lines 41-53 (emphasis added). Accordingly, the Hatanaka reference clearly teaches away from the *etched* glass transparent panel of Morgan. In light of these passages, one of ordinary skill in the art would be discouraged from using a transparent panel having an etched anti-glare treatment with the display of Hatanaka. Accordingly, the Applicant respectfully maintains that the cited references do not teach or suggest, alone or in combination, the presently claimed technique.

Additionally, as would be recognized by one of ordinary skill in the art, incorporating any textured front surface into a *reflective* display, such as the one disclosed by Hatanaka, would render such a display unsatisfactory for its intended purpose. If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the combination. *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). A reflective display operates by allowing ambient light to enter the display screen and reflect that same light back out of the device. As known by one of ordinary skill in the art, textured surfaces cause back scattering. While such back scattering may be of lesser importance in *transmissive* displays, which use an independent light source, incorporation of a back scattering front panel into a *reflective* display would cause less ambient light to enter the display and, thus, less light to exit the display. This, in turn, results in a dimmer image, blacks that appear to be gray, and poor contrast, directly contrary to the object of the Hatanaka

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reference, to “present a reflective liquid crystal display device which is bright in white display, sufficiently dark in black display, [and] high in contrast....” Hatanaka, column 2, lines 8-11. Because the Hatanaka device would be rendered unsatisfactory for its intended purpose by the incorporation of the textured, anti-glare front surface of Morgan, these references are not properly combinable with respect to claims 6, 7, and 10.

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Conclusion

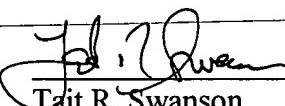
In view of the foregoing remarks, Applicant respectfully submits that all pending claims should be in condition for allowance. Accordingly, Applicant requests the Examiner withdraw the outstanding rejections. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

General Authorization for Extensions of Time

In accordance with 37 C.F.R. § 1.136, Applicant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request therefor. Furthermore, Applicant authorizes the Commissioner to charge the appropriate fee for any extension of time to Deposit Account No. 06-1315; Order No. LCOM:0007.

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Respectfully Submitted,


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